

In the Claims

1-49 (Canceled).

50 (Currently Amended). A recombinant, purified or isolated polynucleotide comprising:

- a) ~~at least 1000 consecutive nucleotides of SEQ ID NO: 179;~~
- ba) SEQ ID NO: 179;
- eb) a contiguous span of nucleotides selected from a group of nucleotide sequences spanning from position N-X to position N+Y of SEQ ID NO: 179 or a contiguous span of nucleotides that is complementary to said contiguous span of nucleotides selected from a group of nucleotide sequences spanning from position N-X to position N+Y of SEQ ID NO: 179, wherein:
 - i) X is equal to 8, 10, 12, 15, 20, 25, or a range of 8 to 30;
 - ii) Y is equal to 8, 10, 12, 15, 20, 25, or a range of 8 to 30; and
 - iii) N is equal to one of the following values: 2159; 2443; 4452; 5733; 8438; 11843; 1983; 12080; 12221; 12947; 13147; 13194; 13310; 13342; 13367; 13594; 13680; 13902; 16231; 16388; 17608; 18034; 18290; 18786; 22835; 22872; 25183; 25192; 25614; 26911; 32703; 34491; 34756; 34934; 5160; 39897; 40598; 40816; 40947; 45783; 47929; 48206; 48207; 49282; 50037; 50054; 50101; 50220; 50440; 50562; 50653; 50660; 50745; 50885; 51249; 51333; 51435; 51468; 51515; 51557; 51566; 51632; 51666; 52016; 52096; 52151; 52282; 52348; 52410; 52580; 52712; 52772; 52860; 53092; 53272; 53389; 53511; 53600; 53665; 53815; 54365; or 54541;
- e) a contiguous span of nucleotides that is complementary to said contiguous span of nucleotides selected from a group of nucleotide sequences spanning from position N-X to position N+Y of SEQ ID NO: 179, wherein:
 - i) X is equal to 8, 10, 12, 15, 20, 25, or a range of 8 to 30;
 - ii) Y is equal to 8, 10, 12, 15, 20, 25, or a range of 8 to 30; and

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iii) N is equal to one of the following values: 2159; 2443; 4452; 5733; 8438; 11843; 1983; 12080; 12221; 12947; 13147; 13194; 13310; 13342; 13367; 13594; 13680; 13902; 16231; 16388; 17608; 18034; 18290; 18786; 22835; 22872; 25183; 25192; 25614; 26911; 32703; 34491; 34756; 34934; 5160; 39897; 40598; 40816; 40947; 45783; 47929; 48206; 48207; 49282; 50037; 50054; 50101; 50220; 50440; 50562; 50653; 50660; 50745; 50885; 51249; 52016; 53272; 53389; 53511; 53600; 53665; 53815; 54365; or 54541;

d) a polynucleotide of at least 1000 consecutive nucleotides that is complementary to a polynucleotide as set forth in a), b), or c); or

e) a contiguous span of nucleotides selected from a group of nucleotide sequences spanning from position N-X to position N-1 of SEQ ID NO: 179 or a contiguous span of nucleotides that is complementary to said contiguous span of nucleotides selected from a group of nucleotide sequences spanning from position N-X to position N-1 of SEQ ID NO: 179, wherein:

i) X is equal to 15, 18, 20, 25, 30, or a range of 15 to 30; and

ii) N is equal to one of the following values: 2159; 2443; 4452; 5733; 8438; 11843; 1983; 12080; 12221; 12947; 13147; 13194; 13310; 13342; 13367; 13594; 13680; 13902; 16231; 16388; 17608; 18034; 18290; 18786; 22835; 22872; 25183; 25192; 25614; 26911; 32703; 34491; 34756; 34934; 5160; 39897; 40598; 40816; 40947; 45783; 47929; 48206; 48207; 49282; 50037; 50054; 50101; 50220; 50440; 50562; 50653; 50660; 50745; 50885; 51249; 51333; 51435; 51468; 51515; 51557; 51566; 51632; 51666; 52016; 52096; 52151; 52282; 52348; 52410; 52580; 52712; 52772; 52860; 53092; 53272; 53389; 53511; 53600; 53665; 53815; 54365; or 54541;

f) a contiguous span of nucleotides that is complementary to said contiguous span of nucleotides selected from a group of nucleotide sequences spanning from position N-X to position N+Y of SEQ ID NO: 179, wherein:

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- i) X is equal to 8, 10, 12, 15, 20, 25, or a range of 8 to 30;
- ii) Y is equal to 8, 10, 12, 15, 20, 25, or a range of 8 to 30; and
- iii) N is equal to one of the following values: 2159; 2443; 4452; 5733; 8438; 11843; 1983; 12080; 12221; 12947; 13147; 13194; 13310; 13342; 13367; 13594; 13680; 13902; 16231; 16388; 17608; 18034; 18290; 18786; 22835; 22872; 25183; 25192; 25614; 26911; 32703; 34491; 34756; 34934; 5160; 39897; 40598; 40816; 40947; 45783; 47929; 48206; 48207; 49282; 50037; 50054; 50101; 50220; 50440; 50562; 50653; 50660; 50745; 50885; 51249; 52016; 53272; 53389; 53511; 53600; 53665; 53815; 54365; or 54541; or

g) a contiguous span of nucleotides that is complementary to said contiguous span of nucleotides selected from a group of nucleotide sequences spanning from position N-X to position N-1 of SEQ ID NO: 179, wherein:

- i) X is equal to 15, 18, 20, 25, 30, or a range of 15 to 30; and
- ii) N is equal to one of the following values: 2159; 2443; 4452; 5733; 8438; 11843; 1983; 12080; 12221; 12947; 13147; 13194; 13310; 13342; 13367; 13594; 13680; 13902; 16231; 16388; 17608; 18034; 18290; 18786; 22835; 22872; 25183; 25192; 25614; 26911; 32703; 34491; 34756; 34934; 5160; 39897; 40598; 40816; 40947; 45783; 47929; 48206; 48207; 49282; 50037; 50054; 50101; 50220; 50440; 50562; 50653; 50660; 50745; 50885; 51249; 53272; 53389; 53511; 53600; 53665; 53815; 54365; or 54541.

51 (Currently Amended). A vector comprising a polynucleotide:

- a) ~~comprising at least 1000 consecutive nucleotides of SEQ ID NO: 179;~~
- ba) comprising SEQ ID NO: 179;
- eb) comprising a contiguous span of nucleotides selected from a group of nucleotide sequences spanning from position N-X to position N+Y of SEQ ID NO: 179 ~~or a contiguous span of nucleotides that is complementary to said~~

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~~contiguous span of nucleotides selected from a group of nucleotide sequences spanning from position N-X to position N+Y of SEQ ID NO: 179, wherein:~~

- ~~i) X is equal to 8, 10, 12, 15, 20, 25, or a range of 8 to 30;~~
- ~~ii) Y is equal to 8, 10, 12, 15, 20, 25, or a range of 8 to 30; and~~
- ~~iii) N is equal to one of the following values: 2159; 2443; 4452; 5733; 8438; 11843; 1983; 12080; 12221; 12947; 13147; 13194; 13310; 13342; 13367; 13594; 13680; 13902; 16231; 16388; 17608; 18034; 18290; 18786; 22835; 22872; 25183; 25192; 25614; 26911; 32703; 34491; 34756; 34934; 5160; 39897; 40598; 40816; 40947; 45783; 47929; 48206; 48207; 49282; 50037; 50054; 50101; 50220; 50440; 50562; 50653; 50660; 50745; 50885; 51249; 51333; 51435; 51468; 51515; 51557; 51566; 51632; 51666; 52016; 52096; 52151; 52282; 52348; 52410; 52580; 52712; 52772; 52860; 53092; 53272; 53389; 53511; 53600; 53665; 53815; 54365; or 54541;~~

~~c) a contiguous span of nucleotides that is complementary to said contiguous span of nucleotides selected from a group of nucleotide sequences spanning from position N-X to position N+Y of SEQ ID NO: 179, wherein:~~

- ~~i) X is equal to 8, 10, 12, 15, 20, 25, or a range of 8 to 30;~~
- ~~ii) Y is equal to 8, 10, 12, 15, 20, 25, or a range of 8 to 30; and~~
- ~~iii) N is equal to one of the following values: 2159; 2443; 4452; 5733; 8438; 11843; 1983; 12080; 12221; 12947; 13147; 13194; 13310; 13342; 13367; 13594; 13680; 13902; 16231; 16388; 17608; 18034; 18290; 18786; 22835; 22872; 25183; 25192; 25614; 26911; 32703; 34491; 34756; 34934; 5160; 39897; 40598; 40816; 40947; 45783; 47929; 48206; 48207; 49282; 50037; 50054; 50101; 50220; 50440; 50562; 50653; 50660; 50745; 50885; 51249; 52016; 53272; 53389; 53511; 53600; 53665; 53815; 54365; or 54541;~~

~~d) comprising a polynucleotide of at least 1000 consecutive nucleotides that is complementary to a polynucleotide as set forth in a), b), or c); or~~

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- e) a contiguous span of nucleotides selected from a group of nucleotide sequences spanning from position N-X to position N-1 of SEQ ID NO: 179 ~~or a contiguous span of nucleotides that is complementary to said contiguous span of nucleotides selected from a group of nucleotide sequences spanning from position N-X to position N-1 of SEQ ID NO: 179~~, wherein:
- i) X is equal to 15, 18, 20, 25, 30, or a range of 15 to 30; and
 - ii) N is equal to one of the following values: 2159; 2443; 4452; 5733; 8438; 11843; 1983; 12080; 12221; 12947; 13147; 13194; 13310; 13342; 13367; 13594; 13680; 13902; 16231; 16388; 17608; 18034; 18290; 18786; 22835; 22872; 25183; 25192; 25614; 26911; 32703; 34491; 34756; 34934; 5160; 39897; 40598; 40816; 40947; 45783; 47929; 48206; 48207; 49282; 50037; 50054; 50101; 50220; 50440; 50562; 50653; 50660; 50745; 50885; 51249; 51333; 51435; 51468; 51515; 51557; 51566; 51632; 51666; 52016; 52096; 52151; 52282; 52348; 52410; 52580; 52712; 52772; 52860; 53092; 53272; 53389; 53511; 53600; 53665; 53815; 54365; or 54541;
- f) a contiguous span of nucleotides that is complementary to said contiguous span of nucleotides selected from a group of nucleotide sequences spanning from position N-X to position N+Y of SEQ ID NO: 179, wherein:
- i) X is equal to 8, 10, 12, 15, 20, 25, or a range of 8 to 30;
 - ii) Y is equal to 8, 10, 12, 15, 20, 25, or a range of 8 to 30; and
 - iii) N is equal to one of the following values: 2159; 2443; 4452; 5733; 8438; 11843; 1983; 12080; 12221; 12947; 13147; 13194; 13310; 13342; 13367; 13594; 13680; 13902; 16231; 16388; 17608; 18034; 18290; 18786; 22835; 22872; 25183; 25192; 25614; 26911; 32703; 34491; 34756; 34934; 5160; 39897; 40598; 40816; 40947; 45783; 47929; 48206; 48207; 49282; 50037; 50054; 50101; 50220; 50440; 50562; 50653; 50660; 50745; 50885; 51249; 52016; 53272; 53389; 53511; 53600; 53665; 53815; 54365; or 54541; or

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g) a contiguous span of nucleotides that is complementary to said contiguous span of nucleotides selected from a group of nucleotide sequences spanning from position N-X to position N-1 of SEQ ID NO: 179, wherein:

- i) X is equal to 15, 18, 20, 25, 30, or a range of 15 to 30; and
- ii) N is equal to one of the following values: 2159; 2443; 4452; 5733; 8438; 11843; 1983; 12080; 12221; 12947; 13147; 13194; 13310; 13342; 13367; 13594; 13680; 13902; 16231; 16388; 17608; 18034; 18290; 18786; 22835; 22872; 25183; 25192; 25614; 26911; 32703; 34491; 34756; 34934; 5160; 39897; 40598; 40816; 40947; 45783; 47929; 48206; 48207; 49282; 50037; 50054; 50101; 50220; 50440; 50562; 50653; 50660; 50745; 50885; 51249; 53272; 53389; 53511; 53600; 53665; 53815; 54365; or 54541.

52 (Currently Amended). A host cell comprising:

1) a polynucleotide comprising:

- a) ~~at least 1000 consecutive nucleotides of SEQ ID NO: 179;~~
- ba) SEQ ID NO: 179;
- ~~eb)~~ a contiguous span of nucleotides selected from a group of nucleotide sequences spanning from position N-X to position N+Y of SEQ ID NO: 179 ~~or a contiguous span of nucleotides that is complementary to said contiguous span of nucleotides selected from a group of nucleotide sequences spanning from position N-X to position N+Y of SEQ ID NO: 179, wherein:~~
- i) X is equal to 8, 10, 12, 15, 20, 25, or a range of 8 to 30;
- ii) Y is equal to 8, 10, 12, 15, 20, 25, or a range of 8 to 30; and
- iii) N is equal to one of the following values: 2159; 2443; 4452; 5733; 8438; 11843; 1983; 12080; 12221; 12947; 13147; 13194; 13310; 13342; 13367; 13594; 13680; 13902; 16231; 16388; 17608; 18034; 18290; 18786; 22835; 22872; 25183; 25192; 25614; 26911; 32703; 34491; 34756; 34934; 5160; 39897; 40598; 40816; 40947; 45783;

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47929; 48206; 48207; 49282; 50037; 50054; 50101; 50220; 50440;
50562; 50653; 50660; 50745; 50885; 51249; 51333; 51435; 51468;
51515; 51557; 51566; 51632; 51666; 52016; 52096; 52151; 52282;
52348; 52410; 52580; 52712; 52772; 52860; 53092; 53272; 53389;
53511; 53600; 53665; 53815; 54365; or 54541;

c) a contiguous span of nucleotides that is complementary to said contiguous span of nucleotides selected from a group of nucleotide sequences spanning from position N-X to position N+Y of SEQ ID NO: 179, wherein:

- i) X is equal to 8, 10, 12, 15, 20, 25, or a range of 8 to 30;
- ii) Y is equal to 8, 10, 12, 15, 20, 25, or a range of 8 to 30; and
- iii) N is equal to one of the following values: 2159; 2443; 4452; 5733; 8438; 11843; 1983; 12080; 12221; 12947; 13147; 13194; 13310; 13342; 13367; 13594; 13680; 13902; 16231; 16388; 17608; 18034; 18290; 18786; 22835; 22872; 25183; 25192; 25614; 26911; 32703; 34491; 34756; 34934; 5160; 39897; 40598; 40816; 40947; 45783; 47929; 48206; 48207; 49282; 50037; 50054; 50101; 50220; 50440; 50562; 50653; 50660; 50745; 50885; 51249; 52016; 53272; 53389; 53511; 53600; 53665; 53815; 54365; or 54541;

d) a polynucleotide of at least 1000 consecutive nucleotides that is complementary to a polynucleotide as set forth in a), b), or c); or

e) a contiguous span of nucleotides selected from a group of nucleotide sequences spanning from position N-X to position N-1 of SEQ ID NO: 179 ~~or a contiguous span of nucleotides that is complementary to said contiguous span of nucleotides selected from a group of nucleotide sequences spanning from position N-X to position N-1 of SEQ ID NO: 179, wherein:~~

- i) X is equal to 15, 18, 20, 25, 30, or a range of 15 to 30; and
- ii) N is equal to one of the following values: 2159; 2443; 4452; 5733; 8438; 11843; 1983; 12080; 12221; 12947; 13147; 13194; 13310; 13342; 13367; 13594; 13680; 13902; 16231; 16388; 17608; 18034;

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18290; 18786; 22835; 22872; 25183; 25192; 25614; 26911; 32703;
34491; 34756; 34934; 5160; 39897; 40598; 40816; 40947; 45783;
47929; 48206; 48207; 49282; 50037; 50054; 50101; 50220; 50440;
50562; 50653; 50660; 50745; 50885; 51249; ~~51333; 51435; 51468;~~
~~51515; 51557; 51566; 51632; 51666; 52016; 52096; 52151; 52282;~~
~~52348; 52410; 52580; 52712; 52772; 52860; 53092;~~ 53272; 53389;
53511; 53600; 53665; 53815; 54365; or 54541;

f) a contiguous span of nucleotides that is complementary to said contiguous span of nucleotides selected from a group of nucleotide sequences spanning from position N-X to position N+Y of SEQ ID NO: 179, wherein:

i) X is equal to 8, 10, 12, 15, 20, 25, or a range of 8 to 30;

ii) Y is equal to 8, 10, 12, 15, 20, 25, or a range of 8 to 30; and

iii) N is equal to one of the following values: 2159; 2443; 4452; 5733;

8438; 11843; 1983; 12080; 12221; 12947; 13147; 13194; 13310;
13342; 13367; 13594; 13680; 13902; 16231; 16388; 17608; 18034;
18290; 18786; 22835; 22872; 25183; 25192; 25614; 26911; 32703;
34491; 34756; 34934; 5160; 39897; 40598; 40816; 40947; 45783;
47929; 48206; 48207; 49282; 50037; 50054; 50101; 50220; 50440;
50562; 50653; 50660; 50745; 50885; 51249; 52016; 53272; 53389;
53511; 53600; 53665; 53815; 54365; or 54541; or

g) a contiguous span of nucleotides that is complementary to said contiguous span of nucleotides selected from a group of nucleotide sequences spanning from position N-X to position N-1 of SEQ ID NO: 179, wherein:

i) X is equal to 15, 18, 20, 25, 30, or a range of 15 to 30; and

ii) N is equal to one of the following values: 2159; 2443; 4452; 5733;

8438; 11843; 1983; 12080; 12221; 12947; 13147; 13194; 13310;
13342; 13367; 13594; 13680; 13902; 16231; 16388; 17608; 18034;
18290; 18786; 22835; 22872; 25183; 25192; 25614; 26911; 32703;
34491; 34756; 34934; 5160; 39897; 40598; 40816; 40947; 45783;

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47929; 48206; 48207; 49282; 50037; 50054; 50101; 50220; 50440;
50562; 50653; 50660; 50745; 50885; 51249; 53272; 53389; 53511;
53600; 53665; 53815; 54365; or 54541.

2) a vector comprising a polynucleotide:

- a) ~~comprising at least 1000 consecutive nucleotides of SEQ ID NO: 179;~~
- ba) comprising SEQ ID NO: 179;
- cb) comprising a contiguous span of nucleotides selected from a group of nucleotide sequences spanning from position N-X to position N+Y of SEQ ID NO: 179 ~~or a contiguous span of nucleotides that is complementary to said contiguous span of nucleotides selected from a group of nucleotide sequences spanning from position N-X to position N+Y of SEQ ID NO: 179,~~ wherein:
 - i) X is equal to 8, 10, 12, 15, 20, 25, or a range of 8 to 30;
 - ii) Y is equal to 8, 10, 12, 15, 20, 25, or a range of 8 to 30; and
 - iii) N is equal to one of the following values: 2159; 2443; 4452; 5733; 8438; 11843; 1983; 12080; 12221; 12947; 13147; 13194; 13310; 13342; 13367; 13594; 13680; 13902; 16231; 16388; 17608; 18034; 18290; 18786; 22835; 22872; 25183; 25192; 25614; 26911; 32703; 34491; 34756; 34934; 5160; 39897; 40598; 40816; 40947; 45783; 47929; 48206; 48207; 49282; 50037; 50054; 50101; 50220; 50440; 50562; 50653; 50660; 50745; 50885; 51249; ~~51333; 51435; 51468;~~ ~~51515; 51557; 51566; 51632; 51666; 52016; 52096; 52151; 52282;~~ ~~52348; 52410; 52580; 52712; 52772; 52860; 53092; 53272; 53389;~~ 53511; 53600; 53665; 53815; 54365; or 54541;
- e) a contiguous span of nucleotides that is complementary to said contiguous span of nucleotides selected from a group of nucleotide sequences spanning from position N-X to position N+Y of SEQ ID NO: 179, wherein:
 - i) X is equal to 8, 10, 12, 15, 20, 25, or a range of 8 to 30;
 - ii) Y is equal to 8, 10, 12, 15, 20, 25, or a range of 8 to 30; and

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- iii) N is equal to one of the following values: 2159; 2443; 4452; 5733; 8438; 11843; 1983; 12080; 12221; 12947; 13147; 13194; 13310; 13342; 13367; 13594; 13680; 13902; 16231; 16388; 17608; 18034; 18290; 18786; 22835; 22872; 25183; 25192; 25614; 26911; 32703; 34491; 34756; 34934; 5160; 39897; 40598; 40816; 40947; 45783; 47929; 48206; 48207; 49282; 50037; 50054; 50101; 50220; 50440; 50562; 50653; 50660; 50745; 50885; 51249; 52016; 53272; 53389; 53511; 53600; 53665; 53815; 54365; or 54541;
- d) comprising a polynucleotide of at least 1000 consecutive nucleotides that is complementary to a polynucleotide as set forth in a), b), or c); ~~or~~
- e) a contiguous span of nucleotides selected from a group of nucleotide sequences spanning from position N-X to position N-1 of SEQ ID NO: 179 ~~or a contiguous span of nucleotides that is complementary to said contiguous span of nucleotides selected from a group of nucleotide sequences spanning from position N-X to position N-1 of SEQ ID NO: 179, wherein:~~
- i) X is equal to 15, 18, 20, 25, 30, or a range of 15 to 30; and
- ii) N is equal to one of the following values: 2159; 2443; 4452; 5733; 8438; 11843; 1983; 12080; 12221; 12947; 13147; 13194; 13310; 13342; 13367; 13594; 13680; 13902; 16231; 16388; 17608; 18034; 18290; 18786; 22835; 22872; 25183; 25192; 25614; 26911; 32703; 34491; 34756; 34934; 5160; 39897; 40598; 40816; 40947; 45783; 47929; 48206; 48207; 49282; 50037; 50054; 50101; 50220; 50440; 50562; 50653; 50660; 50745; 50885; 51249; 51333; 51435; 51468; 51515; 51557; 51566; 51632; 51666; 52016; 52096; 52151; 52282; 52348; 52410; 52580; 52712; 52772; 52860; 53092; 53272; 53389; 53511; 53600; 53665; 53815; 54365; or 54541;
- f) a contiguous span of nucleotides that is complementary to said contiguous span of nucleotides selected from a group of nucleotide sequences spanning from position N-X to position N+Y of SEQ ID NO: 179, wherein:

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- i) X is equal to 8, 10, 12, 15, 20, 25, or a range of 8 to 30;
- ii) Y is equal to 8, 10, 12, 15, 20, 25, or a range of 8 to 30; and
- iii) N is equal to one of the following values: 2159; 2443; 4452; 5733; 8438; 11843; 1983; 12080; 12221; 12947; 13147; 13194; 13310; 13342; 13367; 13594; 13680; 13902; 16231; 16388; 17608; 18034; 18290; 18786; 22835; 22872; 25183; 25192; 25614; 26911; 32703; 34491; 34756; 34934; 5160; 39897; 40598; 40816; 40947; 45783; 47929; 48206; 48207; 49282; 50037; 50054; 50101; 50220; 50440; 50562; 50653; 50660; 50745; 50885; 51249; 52016; 53272; 53389; 53511; 53600; 53665; 53815; 54365; or 54541; or

- g) a contiguous span of nucleotides that is complementary to said contiguous span of nucleotides selected from a group of nucleotide sequences spanning from position N-X to position N-1 of SEQ ID NO: 179, wherein:

- i) X is equal to 15, 18, 20, 25, 30, or a range of 15 to 30; and
- ii) N is equal to one of the following values: 2159; 2443; 4452; 5733; 8438; 11843; 1983; 12080; 12221; 12947; 13147; 13194; 13310; 13342; 13367; 13594; 13680; 13902; 16231; 16388; 17608; 18034; 18290; 18786; 22835; 22872; 25183; 25192; 25614; 26911; 32703; 34491; 34756; 34934; 5160; 39897; 40598; 40816; 40947; 45783; 47929; 48206; 48207; 49282; 50037; 50054; 50101; 50220; 50440; 50562; 50653; 50660; 50745; 50885; 51249; 53272; 53389; 53511; 53600; 53665; 53815; 54365; or 54541.

53 (Currently Amended). A nonhuman host animal or mammal comprising:

- 1) a polynucleotide comprising:

- a) ~~at least 1000 consecutive nucleotides of SEQ ID NO: 179;~~
- ba) SEQ ID NO: 179;
- cb) a contiguous span of nucleotides selected from a group of nucleotide sequences spanning from position N-X to position N+Y of SEQ ID NO: 179

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~~or a contiguous span of nucleotides that is complementary to said contiguous span of nucleotides selected from a group of nucleotide sequences spanning from position N-X to position N+Y of SEQ ID NO: 179, wherein:~~

- ~~i) X is equal to 8, 10, 12, 15, 20, 25, or a range of 8 to 30;~~
- ~~ii) Y is equal to 8, 10, 12, 15, 20, 25, or a range of 8 to 30; and~~
- ~~iii) N is equal to one of the following values: 2159; 2443; 4452; 5733; 8438; 11843; 1983; 12080; 12221; 12947; 13147; 13194; 13310; 13342; 13367; 13594; 13680; 13902; 16231; 16388; 17608; 18034; 18290; 18786; 22835; 22872; 25183; 25192; 25614; 26911; 32703; 34491; 34756; 34934; 5160; 39897; 40598; 40816; 40947; 45783; 47929; 48206; 48207; 49282; 50037; 50054; 50101; 50220; 50440; 50562; 50653; 50660; 50745; 50885; 51249; 51333; 51435; 51468; 51515; 51557; 51566; 51632; 51666; 52016; 52096; 52151; 52282; 52348; 52410; 52580; 52712; 52772; 52860; 53092; 53272; 53389; 53511; 53600; 53665; 53815; 54365; or 54541;~~

c) a contiguous span of nucleotides that is complementary to said contiguous span of nucleotides selected from a group of nucleotide sequences spanning from position N-X to position N+Y of SEQ ID NO: 179, wherein:

- i) X is equal to 8, 10, 12, 15, 20, 25, or a range of 8 to 30;
- ii) Y is equal to 8, 10, 12, 15, 20, 25, or a range of 8 to 30; and
- iii) N is equal to one of the following values: 2159; 2443; 4452; 5733; 8438; 11843; 1983; 12080; 12221; 12947; 13147; 13194; 13310; 13342; 13367; 13594; 13680; 13902; 16231; 16388; 17608; 18034; 18290; 18786; 22835; 22872; 25183; 25192; 25614; 26911; 32703; 34491; 34756; 34934; 5160; 39897; 40598; 40816; 40947; 45783; 47929; 48206; 48207; 49282; 50037; 50054; 50101; 50220; 50440; 50562; 50653; 50660; 50745; 50885; 51249; 52016; 53272; 53389; 53511; 53600; 53665; 53815; 54365; or 54541;

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- d) a polynucleotide of at least 1000 consecutive nucleotides that is complementary to a polynucleotide as set forth in a), b), or c); ~~or~~
- e) a contiguous span of nucleotides selected from a group of nucleotide sequences spanning from position N-X to position N-1 of SEQ ID NO: 179 ~~or a contiguous span of nucleotides that is complementary to said contiguous span of nucleotides selected from a group of nucleotide sequences spanning from position N-X to position N-1 of SEQ ID NO: 179, wherein:~~
- i) X is equal to 15, 18, 20, 25, 30, or a range of 15 to 30; and
 - ii) N is equal to one of the following values: 2159; 2443; 4452; 5733; 8438; 11843; 1983; 12080; 12221; 12947; 13147; 13194; 13310; 13342; 13367; 13594; 13680; 13902; 16231; 16388; 17608; 18034; 18290; 18786; 22835; 22872; 25183; 25192; 25614; 26911; 32703; 34491; 34756; 34934; 5160; 39897; 40598; 40816; 40947; 45783; 47929; 48206; 48207; 49282; 50037; 50054; 50101; 50220; 50440; 50562; 50653; 50660; 50745; 50885; 51249; ~~51333; 51435; 51468; 51515; 51557; 51566; 51632; 51666; 52016; 52096; 52151; 52282; 52348; 52410; 52580; 52712; 52772; 52860; 53092; 53272; 53389;~~ 53511; 53600; 53665; 53815; 54365; or 54541;
- f) a contiguous span of nucleotides that is complementary to said contiguous span of nucleotides selected from a group of nucleotide sequences spanning from position N-X to position N+Y of SEQ ID NO: 179, wherein:
- i) X is equal to 8, 10, 12, 15, 20, 25, or a range of 8 to 30;
 - ii) Y is equal to 8, 10, 12, 15, 20, 25, or a range of 8 to 30; and
 - iii) N is equal to one of the following values: 2159; 2443; 4452; 5733; 8438; 11843; 1983; 12080; 12221; 12947; 13147; 13194; 13310; 13342; 13367; 13594; 13680; 13902; 16231; 16388; 17608; 18034; 18290; 18786; 22835; 22872; 25183; 25192; 25614; 26911; 32703; 34491; 34756; 34934; 5160; 39897; 40598; 40816; 40947; 45783; 47929; 48206; 48207; 49282; 50037; 50054; 50101; 50220; 50440;

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50562; 50653; 50660; 50745; 50885; 51249; 52016; 53272; 53389;53511; 53600; 53665; 53815; 54365; or 54541; or

g) a contiguous span of nucleotides that is complementary to said contiguous span of nucleotides selected from a group of nucleotide sequences spanning from position N-X to position N-1 of SEQ ID NO: 179, wherein:

i) X is equal to 15, 18, 20, 25, 30, or a range of 15 to 30; and

ii) N is equal to one of the following values: 2159; 2443; 4452; 5733;

8438; 11843; 1983; 12080; 12221; 12947; 13147; 13194; 13310;13342; 13367; 13594; 13680; 13902; 16231; 16388; 17608; 18034;18290; 18786; 22835; 22872; 25183; 25192; 25614; 26911; 32703;34491; 34756; 34934; 5160; 39897; 40598; 40816; 40947; 45783;47929; 48206; 48207; 49282; 50037; 50054; 50101; 50220; 50440;50562; 50653; 50660; 50745; 50885; 51249; 53272; 53389; 53511;53600; 53665; 53815; 54365; or 54541;

2) a vector comprising a polynucleotide:

a) ~~comprising at least 1000 consecutive nucleotides of SEQ ID NO: 179;~~

ba) comprising SEQ ID NO: 179;

eb) comprising a contiguous span of nucleotides selected from a group of nucleotide sequences spanning from position N-X to position N+Y of SEQ ID NO: 179 ~~or a contiguous span of nucleotides that is complementary to said contiguous span of nucleotides selected from a group of nucleotide sequences spanning from position N-X to position N+Y of SEQ ID NO: 179, wherein:~~

i) X is equal to 8, 10, 12, 15, 20, 25, or a range of 8 to 30;

ii) Y is equal to 8, 10, 12, 15, 20, 25, or a range of 8 to 30; and

iii) N is equal to one of the following values: 2159; 2443; 4452; 5733;

8438; 11843; 1983; 12080; 12221; 12947; 13147; 13194; 13310;13342; 13367; 13594; 13680; 13902; 16231; 16388; 17608; 18034;18290; 18786; 22835; 22872; 25183; 25192; 25614; 26911; 32703;34491; 34756; 34934; 5160; 39897; 40598; 40816; 40947; 45783;

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47929; 48206; 48207; 49282; 50037; 50054; 50101; 50220; 50440;
50562; 50653; 50660; 50745; 50885; 51249; 51333; 51435; 51468;
51515; 51557; 51566; 51632; 51666; 52016; 52096; 52151; 52282;
52348; 52410; 52580; 52712; 52772; 52860; 53092; 53272; 53389;
53511; 53600; 53665; 53815; 54365; or 54541;

c) a contiguous span of nucleotides that is complementary to said contiguous span of nucleotides selected from a group of nucleotide sequences spanning from position N-X to position N+Y of SEQ ID NO: 179, wherein:

- i) X is equal to 8, 10, 12, 15, 20, 25, or a range of 8 to 30;
- ii) Y is equal to 8, 10, 12, 15, 20, 25, or a range of 8 to 30; and
- iii) N is equal to one of the following values: 2159; 2443; 4452; 5733; 8438; 11843; 1983; 12080; 12221; 12947; 13147; 13194; 13310; 13342; 13367; 13594; 13680; 13902; 16231; 16388; 17608; 18034; 18290; 18786; 22835; 22872; 25183; 25192; 25614; 26911; 32703; 34491; 34756; 34934; 5160; 39897; 40598; 40816; 40947; 45783; 47929; 48206; 48207; 49282; 50037; 50054; 50101; 50220; 50440; 50562; 50653; 50660; 50745; 50885; 51249; 52016; 53272; 53389; 53511; 53600; 53665; 53815; 54365; or 54541;

d) comprising a polynucleotide of at least 1000 consecutive nucleotides that is complementary to a polynucleotide as set forth in a), b), or c); or

c) a contiguous span of nucleotides selected from a group of nucleotide sequences spanning from position N-X to position N-1 of SEQ ID NO: 179 ~~or a contiguous span of nucleotides that is complementary to said contiguous span of nucleotides selected from a group of nucleotide sequences spanning from position N-X to position N-1 of SEQ ID NO: 179, wherein:~~

- i) X is equal to 15, 18, 20, 25, 30, or a range of 15 to 30; and
- ii) N is equal to one of the following values: 2159; 2443; 4452; 5733; 8438; 11843; 1983; 12080; 12221; 12947; 13147; 13194; 13310; 13342; 13367; 13594; 13680; 13902; 16231; 16388; 17608; 18034;

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18290; 18786; 22835; 22872; 25183; 25192; 25614; 26911; 32703;
34491; 34756; 34934; 5160; 39897; 40598; 40816; 40947; 45783;
47929; 48206; 48207; 49282; 50037; 50054; 50101; 50220; 50440;
50562; 50653; 50660; 50745; 50885; 51249; ~~51333; 51435; 51468;~~
~~51515; 51557; 51566; 51632; 51666; 52016; 52096; 52151; 52282;~~
~~52348; 52410; 52580; 52712; 52772; 52860; 53092; 53272; 53389;~~
53511; 53600; 53665; 53815; 54365; or 54541;

f) a contiguous span of nucleotides that is complementary to said contiguous span of nucleotides selected from a group of nucleotide sequences spanning from position N-X to position N+Y of SEQ ID NO: 179, wherein:

i) X is equal to 8, 10, 12, 15, 20, 25, or a range of 8 to 30;

ii) Y is equal to 8, 10, 12, 15, 20, 25, or a range of 8 to 30; and

iii) N is equal to one of the following values: 2159; 2443; 4452; 5733; 8438; 11843; 1983; 12080; 12221; 12947; 13147; 13194; 13310; 13342; 13367; 13594; 13680; 13902; 16231; 16388; 17608; 18034; 18290; 18786; 22835; 22872; 25183; 25192; 25614; 26911; 32703; 34491; 34756; 34934; 5160; 39897; 40598; 40816; 40947; 45783; 47929; 48206; 48207; 49282; 50037; 50054; 50101; 50220; 50440; 50562; 50653; 50660; 50745; 50885; 51249; 52016; 53272; 53389; 53511; 53600; 53665; 53815; 54365; or 54541; or

g) a contiguous span of nucleotides that is complementary to said contiguous span of nucleotides selected from a group of nucleotide sequences spanning from position N-X to position N-1 of SEQ ID NO: 179, wherein:

i) X is equal to 15, 18, 20, 25, 30, or a range of 15 to 30; and

ii) N is equal to one of the following values: 2159; 2443; 4452; 5733; 8438; 11843; 1983; 12080; 12221; 12947; 13147; 13194; 13310; 13342; 13367; 13594; 13680; 13902; 16231; 16388; 17608; 18034; 18290; 18786; 22835; 22872; 25183; 25192; 25614; 26911; 32703; 34491; 34756; 34934; 5160; 39897; 40598; 40816; 40947; 45783;

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47929; 48206; 48207; 49282; 50037; 50054; 50101; 50220; 50440;
50562; 50653; 50660; 50745; 50885; 51249; 53272; 53389; 53511;
53600; 53665; 53815; 54365; or 54541.

54-55 (Canceled).

56 (Previously Presented). The isolated, purified, or recombinant polynucleotide of claim 50, further comprising a label.

57 (Previously Presented). The isolated, purified, or recombinant polynucleotide of claim 50, wherein said polynucleotide is attached to a solid support.

58 (Previously Presented). A random or addressable array of polynucleotides comprising at least one polynucleotide according to claim 50.

59 (Canceled).

60 (Previously Presented). The isolated, purified, or recombinant polynucleotide according to claim 50, wherein said polynucleotide is SEQ ID NO: 179.

61-62 (Canceled).

63 (Currently Amended). The isolated, purified, or recombinant polynucleotide according to claim 50, wherein said polynucleotide is a contiguous span of nucleotides selected from a group of nucleotide sequences spanning from position N-X to position N+Y of SEQ ID NO: 179 or a contiguous span of nucleotides that is complementary to said contiguous span of nucleotides selected from a group of nucleotide sequences spanning from position N-X to position N+Y of SEQ ID NO: 179, wherein:

- i) X is equal to 8, 10, 12, 15, 20, 25, or a range of 8 to 30;

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- ii) Y is equal to 8, 10, 12, 15, 20, 25, or a range of 8 to 30; and
- iii) N is equal to one of the following values: 2159; 2443; 4452; 5733; 8438; 11843; 1983; 12080; 12221; 12947; 13147; 13194; 13310; 13342; 13367; 13594; 13680; 13902; 16231; 16388; 17608; 18034; 18290; 18786; 22835; 22872; 25183; 25192; 25614; 26911; 32703; 34491; 34756; 34934; 5160; 39897; 40598; 40816; 40947; 45783; 47929; 48206; 48207; 49282; 50037; 50054; 50101; 50220; 50440; 50562; 50653; 50660; 50745; 50885; 51249; ~~51333; 51435; 51468; 51515; 51557; 51566; 51632; 51666; 52016; 52096; 52151; 52282; 52348; 52410; 52580; 52712; 52772; 52860; 53092; 53272; 53389; 53511; 53600; 53665; 53815; 54365;~~ or 54541.

64 (Currently Amended). The isolated, purified, or recombinant polynucleotide according to claim 50, wherein said polynucleotide is a contiguous span of nucleotides that is complementary to said contiguous span of nucleotides selected from a group of nucleotide sequences spanning from position N-X to position N-1 of SEQ ID NO: 179, wherein:

- i) X is equal to 15, 18, 20, 25, 30, or a range of 15 to 30; and
- ii) N is equal to one of the following values: 2159; 2443; 4452; 5733; 8438; 11843; 1983; 12080; 12221; 12947; 13147; 13194; 13310; 13342; 13367; 13594; 13680; 13902; 16231; 16388; 17608; 18034; 18290; 18786; 22835; 22872; 25183; 25192; 25614; 26911; 32703; 34491; 34756; 34934; 5160; 39897; 40598; 40816; 40947; 45783; 47929; 48206; 48207; 49282; 50037; 50054; 50101; 50220; 50440; 50562; 50653; 50660; 50745; 50885; 51249; 53272; 53389; 53511; 53600; 53665; 53815; 54365; or 54541 ~~polynucleotide of at least 1000 consecutive nucleotides that is complementary to a polynucleotide as set forth in claim 60.~~

65-66 (Canceled)

67 (Currently Amended). The recombinant, purified or isolated polynucleotide according to claim 50, wherein said recombinant, purified, or isolated polynucleotide ~~is comprises a contiguous span of nucleotides that is complementary to said contiguous span of nucleotides selected from a~~

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group of nucleotide sequences spanning from position N-X to position N+Y of SEQ ID NO: 179, wherein:

- i) X is equal to 8, 10, 12, 15, 20, 25, or a range of 8 to 30;
- ii) Y is equal to 8, 10, 12, 15, 20, 25, or a range of 8 to 30; and
- iii) N is equal to one of the following values: 2159; 2443; 4452; 5733; 8438; 11843; 1983; 12080; 12221; 12947; 13147; 13194; 13310; 13342; 13367; 13594; 13680; 13902; 16231; 16388; 17608; 18034; 18290; 18786; 22835; 22872; 25183; 25192; 25614; 26911; 32703; 34491; 34756; 34934; 5160; 39897; 40598; 40816; 40947; 45783; 47929; 48206; 48207; 49282; 50037; 50054; 50101; 50220; 50440; 50562; 50653; 50660; 50745; 50885; 51249; 52016; 53272; 53389; 53511; 53600; 53665; 53815; 54365; or 54541~~a probe consisting essentially of said contiguous span of nucleotides selected from a group of nucleotide sequences spanning from position N-X to position N+Y of SEQ ID NO: 179.~~

68 (Currently Amended). The recombinant, purified or isolated polynucleotide according to claim 50, wherein said recombinant, purified, or isolated polynucleotide comprises a contiguous span of nucleotides selected from a group of nucleotide sequences spanning from position N-X to position N-1 of SEQ ID NO: 179, wherein:

- i) X is equal to 15, 18, 20, 25, 30, or a range of 15 to 30; and
- ii) N is equal to one of the following values: 2159; 2443; 4452; 5733; 8438; 11843; 1983; 12080; 12221; 12947; 13147; 13194; 13310; 13342; 13367; 13594; 13680; 13902; 16231; 16388; 17608; 18034; 18290; 18786; 22835; 22872; 25183; 25192; 25614; 26911; 32703; 34491; 34756; 34934; 5160; 39897; 40598; 40816; 40947; 45783; 47929; 48206; 48207; 49282; 50037; 50054; 50101; 50220; 50440; 50562; 50653; 50660; 50745; 50885; 51249; 53272; 53389; 53511; 53600; 53665; 53815; 54365; or 54541~~a probe consisting essentially of a contiguous span of nucleotides selected from a group of nucleotide sequences spanning from position N-X to position N-1 of SEQ ID NO: 179.~~

69 (Currently Amended). The recombinant, purified or isolated polynucleotide according to claim 50, wherein said recombinant, purified, or isolated polynucleotide comprises a polynucleotide

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~~of at least 1000 consecutive nucleotides that is complementary to a polynucleotide as set forth in 50(a), 50(b), or 50(c), is a probe consisting of said contiguous span of nucleotides selected from a group of nucleotide sequences spanning from position N-X to position N+Y of SEQ ID NO: 179.~~

70 (Canceled).

71 (Currently Amended). A recombinant, purified or isolated polynucleotide comprising:

- a) a contiguous span of at least 40, 50, 60, 70, 80, 90, 100, 150, 200, 500 or 1000 nucleotides of SEQ ID NO: 179, wherein said contiguous span comprises at least 1 of the following nucleotide positions of SEQ ID NO: 179: 1-2324, 2852-2936, 3204-3249, 3456-3572, 5028-6086, 6310-8710, 9136-11170, 11534-12104, 12733-13163, 13206-14150, 14191-14302, 14338-14359, 14788-15589, 16050-16409, 16440-21718, 21959-22007, 22086-23057, 23488-23712, 23832-24099, 24165-24376, 24429-24568, 24607-25096, 25127-25269, 25300-27576, 27612-29217, 29415-30776, 30807-30986, 31628-32658, 32699-36324, 36772-39149, 39184-40269, 40580-40683, 40844-41048, 41271-43539, 43570-47024, 47510-48065, 48192-49692, 49723-50174, ~~52626-53599~~, 54516-55209, or 55666-56146; or
- b) a contiguous span of the following nucleotide positions of SEQ ID NO: 179: 1-2324, 2852-2936, 3204-3249, 3456-3572, 5028-6086, 6310-8710, 9136-11170, 11534-12104, 12733-13163, 13206-14150, 14191-14302, 14338-14359, 14788-15589, 16050-16409, 16440-21718, 21959-22007, 22086-23057, 23488-23712, 23832-24099, 24165-24376, 24429-24568, 24607-25096, 25127-25269, 25300-27576, 27612-29217, 29415-30776, 30807-30986, 31628-32658, 32699-36324, 36772-39149, 39184-40269, 40580-40683, 40844-41048, 41271-43539, 43570-47024, 47510-48065, 48192-49692, 49723-50174, 52626-53599, 54516-55209, 55666-56146 or a complementary span of nucleotides to said contiguous span of nucleotide positions.

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72 (Currently Amended). The recombinant, purified or isolated polynucleotide according to claim 71, said contiguous span comprising at least 1 of the nucleotide positions polynucleotide selected from positions: 1-2324, 2852-2936, 3204-3249, 3456-3572, 6310-8710, 9136-11170, 11534-12104, 12733-13163, 13206-14150, 14191-14302, 14338-14359, 14788-15589, 16050-16409, 16440-21718, 21959-22007, 22086-23057, 23488-23712, 23832-24099, 24165-24376, 24429-24568, 24607-25096, 25127-25269, 25300-27576, 27612-29217, 29415-30776, 30807-30986, 31628-32658, 32699-36324, 36772-39149, 39184-40269, 40580-40683, 40844-41048, 41271-43539, 43570-47024, 47510-48065, 48192-49692, 49723-50174, ~~52626-53599~~, 54516-55209, or 55666-56146.

73 (Previously Presented). The recombinant, purified or isolated polynucleotide according to claim 71, said contiguous span comprising at least 1 of the nucleotide positions polynucleotide selected from positions: 3456-3572 or 5028-6086.

74 (Currently Amended). The recombinant, purified or isolated polynucleotide according to claim 71, said polynucleotide comprising: a contiguous span of at least 40, 50, 60, 70, 80, 90, 100, 150, 200, 500 or 1000 nucleotides of SEQ ID NO: 179, wherein said contiguous span comprises at least 1 of the following nucleotide positions of SEQ ID NO: 179: 1-2324, 2852-2936, 3204-3249, 3456-3572, 5028-6086, 6310-8710, 9136-11170, 11534-12104, 12733-13163, 13206-14150, 14191-14302, 14338-14359, 14788-15589, 16050-16409, 16440-21718, 21959-22007, 22086-23057, 23488-23712, 23832-24099, 24165-24376, 24429-24568, 24607-25096, 25127-25269, 25300-27576, 27612-29217, 29415-30776, 30807-30986, 31628-32658, 32699-36324, 36772-39149, 39184-40269, 40580-40683, 40844-41048, 41271-43539, 43570-47024, 47510-48065, 48192-49692, 49723-50174, ~~52626-53599~~, 54516-55209, 55666-56146 or a complementary span of nucleotides to said contiguous span of nucleotide positions.

75 (Previously Presented). The recombinant, purified or isolated polynucleotide according to claim 74, said polynucleotide comprising a contiguous span of at least 40 nucleotides.

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76 (Previously Presented). The recombinant, purified or isolated polynucleotide according to claim 74, said polynucleotide comprising a contiguous span of at least 50 nucleotides.

77 (Previously Presented). The recombinant, purified or isolated polynucleotide according to claim 74, said polynucleotide comprising a contiguous span of at least 60 nucleotides.

78 (Previously Presented). The recombinant, purified or isolated polynucleotide according to claim 74, said polynucleotide comprising a contiguous span of at least 70 nucleotides.

79 (Previously Presented). The recombinant, purified or isolated polynucleotide according to claim 74, said polynucleotide comprising a contiguous span of at least 80 nucleotides.

80 (Previously Presented). The recombinant, purified or isolated polynucleotide according to claim 74, said polynucleotide comprising a contiguous span of at least 90 nucleotides.

81 (Previously Presented). The recombinant, purified or isolated polynucleotide according to claim 74, said polynucleotide comprising a contiguous span of at least 100 nucleotides.

82 (Previously Presented). The recombinant, purified or isolated polynucleotide according to claim 74, said polynucleotide comprising a contiguous span of at least 200 nucleotides.

83 (Previously Presented). The recombinant, purified or isolated polynucleotide according to claim 74, said polynucleotide comprising a contiguous span of at least 500 nucleotides.

84 (Previously Presented). The recombinant, purified or isolated polynucleotide according to claim 74, said polynucleotide comprising a contiguous span of at least 1000 nucleotides.

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85 (New). A probe consisting of a contiguous span of nucleotides selected from the group consisting of nucleotide sequences spanning from position N-X to position N+Y of SEQ ID NO:179, or consisting of a contiguous span of nucleotides that is complementary to said contiguous span of nucleotides selected from a group of nucleotide sequences spanning from position N-X to position N+Y of SEQ ID NO:179, wherein:

- i) X is equal to 8, 10, 12, 15, 20, 25, or a range of 8 to 30;
- ii) Y is equal to 8, 10, 12, 15, 20, 25, or a range of 8 to 30; and
- iii) N is equal to one of the following values: 2159; 2443; 4452; 5733; 8438; 11843; 1983; 12080; 12221; 12947; 13147; 13194; 13310; 13342; 13367; 13594; 13680; 13902; 16231; 16388; 17608; 18034; 18290; 18786; 22835; 22872; 25183; 25192; 25614; 26911; 32703; 34491; 34756; 34934; 5160; 39897; 40598; 40816; 40947; 45783; 47929; 48206; 48207; 49282; 50037; 50054; 50101; 50220; 50440; 50562; 50653; 50660; 50745; 50885; 51249; 53272; 53389; 53511; 53600; 53665; 53815; 54365; or 54541.

86 (New). A primer consisting of a contiguous span of nucleotides selected from the group consisting of nucleotide sequences spanning from position N-X to position N-1 of SEQ ID NO:179, or consisting of a contiguous span of nucleotides that is complementary to said contiguous span of nucleotides selected from a group of nucleotide sequences spanning from position N-X to position N-1 of SEQ ID NO:179, wherein:

- i) X is equal to 15, 18, 20, 25, 30, or a range of 15 to 30; and
- ii) N is equal to one of the following values: 2159; 2443; 4452; 5733; 8438; 11843; 1983; 12080; 12221; 12947; 13147; 13194; 13310; 13342; 13367; 13594; 13680; 13902; 16231; 16388; 17608; 18034; 18290; 18786; 22835; 22872; 25183; 25192; 25614; 26911; 32703; 34491; 34756; 34934; 5160; 39897; 40598; 40816; 40947; 45783; 47929; 48206; 48207; 49282; 50037; 50054; 50101; 50220; 50440; 50562; 50653; 50660; 50745; 50885; 51249; 53272; 53389; 53511; 53600; 53665; 53815; 54365; or 54541.